

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**Applicant : Karsten Schulz**

**Serial No. : 10/721,503**

**Filed : November 26, 2003**

**Title : VIDEO CONFERENCING SYSTEM WITH PHYSICAL CUES**

**Art Unit : 2643**

**Examiner : Wing F. Chan**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

## REPLY TO ACTION OF NOVEMBER 14, 2005

In reply to the Final Office Action of November 14, 2005, Applicant asks that all claims be allowed in view of the following remarks. Claims 1-21 are pending with claims 1, 10 and 15 being independent.

### Rejection of claim 12

Claim 12 stands rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. More particularly, the Office action asserts that “the specification fails to disclose any software analysis process for determining non-verbal communication and the closest mention is only found in section [0012] of the specification. Additionally, the Office action asserts that the specification fails to provide any flowchart of any sort relating to any software to perform the claimed function.” See Office action of November 14, 2005 at page 2. Applicant traverses the assertion that claim 12 does not satisfy the enablement requirement.

The standard for determining whether the specification meets the enablement requirement is whether “the claimed invention be enabled so that any person skilled in the art can make and use the invention without undue experimentation.” See MPEP 2164.01 (citing In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)). “The test of enablement is not whether any experimentation is necessary, but whether, if experimentation is necessary, it is undue.” See MPEP 2164.01 (citing In re Angstadt, 537 F.2d 498, 504, 190 USPQ 214, 219 (CCPA 1976)). Furthermore, the “scope of enablement must only bear a ‘reasonable correlation’ to the scope of the claims.” See MPEP 2164.08 (citing In re Fisher, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970)).

The specification describes “software running on the computer... and operable to infer an emotional state of the remote participant.” See specification at page 13, lines 19-21.

Furthermore, the specification describes “a corresponding software algorithm to determine an emotional state of the remote participant” and “software on the computer... [that] may analyze voice characteristics, such as, for example, modulation, pitch, speaking speed (or change thereof), or volume in determining an emotional state of the remote participant.” See specification at page 14, lines 4-13. The specification also describes that “software is used to gather and interpret data regarding an emotional state and/or physical position of the remote participant.” See specification at page 14, lines 14-15.

By describing the software of claim 12 in this manner, any person skilled in the art would be able to make and use the invention without undue experimentation. Although some experimentation may be required to determine the exact code that would produce the best software for determining a non-verbal communication based on physical movements of a user, the standard does not require that no experimentation be necessary. Thus, because the specification describes software for performing the claimed process, no undue experimentation would be required.

Additionally, although claim 12 now recites a “software analysis process” instead of a “software algorithm,” as recited in original claim 12, software to perform the claimed process (e.g., determine a non-verbal communication) was present in the original claims. Thus, claim 12 satisfies the enablement requirement because “when the subject matter... is in the claims, the limitation in and of itself may enable one skilled in the art to make and use the claimed invention.” See MPEP 2164.

Accordingly, Applicant submits that the subject matter in claim 12 complies with the enablement requirement. Therefore, Applicant requests withdrawal of the rejection of claims 12.

### **Rejection of claims 1-21**

Claims 1-21 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicant traverses the assertion that the claims 1-21 do not satisfy the written description requirement.

The Office action appears to be requiring the explicit use of a flowchart relating to software to perform the claimed function, with respect to claim 12, and very specific detail (beyond a description that the Examiner characterizes as being “only in the broadest sense”) with respect to the other claims. See Office action of November 14, 2005 at page 3. This is simply an improper application of the written description requirement.

“[T]he ‘essential goal’ of the description of the invention requirement is to clearly convey the information that an applicant has invented the subject matter which is claimed.” See MPEP 2163(I) (citing In re Barker, 559 F.2d 588, 592 n.4, 194 USPQ 470, 473 n.4 (CCPA 1977)). Furthermore, “the fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed.” See MPEP 2163.02 (citing Vas-Cath, Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991)). “An applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention.” See MPEP 2163(I) (citing Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997)). The claimed subject matter can be supported by express, implicit, or inherent disclosure. See MPEP 2163 (“While there is no *in haec verba* requirement, newly added claim limitations must be supported in the specification through express, implicit, or inherent disclosure.”). Thus, there is no requirement that a specific form of disclosure be used.

### Claim 12

The Office action asserts that the specification fails to provide an adequate written description of a software analysis process to determine the non-verbal communication, as recited in claim 12. Applicant respectfully disagrees.

The “software analysis process” of claim 12 is supported by the specification. More particularly, the specification describes “software running on the computer... and operable to infer an emotional state of the remote participant.” See specification at page 13, lines 19-21. Furthermore, the specification describes “a corresponding software algorithm to determine an emotional state of the remote participant” and “software on the computer... [that] may analyze

voice characteristics, such as, for example, modulation, pitch, speaking speed (or change thereof), or volume in determining an emotional state of the remote participant.” See specification at page 14, lines 4-13. The specification also describes that “software is used to gather an interpret data regarding an emotional state and/or physical position of the remote participant.” See specification at page 14, lines 14-15.

In each of these instances, the software analysis process being referred to is described as determining a non-verbal communication (e.g., a state of mind) based on the physical movements of a conference participant. Thus, the specification of the present application reasonably conveys that the Applicant has invented a software analysis process for determining a non-verbal communication based on physical movements of a conference participant, as recited in claim 12.

Furthermore, the “software analysis process” is supported by original claim 12. Original claim 12 recited “a software algorithm,” which is analogous to the “software analysis process” presently recited in claim 12. Thus, because “original claims constitute their own description,” see MPEP 2163(I) (citing In re Koller, 613 F.2d 819, 204 USPQ 702 (CCPA 1980)), original claim 12 also clearly conveys that the Applicant has invented the subject matter.

Accordingly, Applicant submits that the subject matter in claim 12 complies with the written description requirement. Therefore, Applicant requests withdrawal of the rejection of claims 12.

#### Claims 1, 10, 15 and 16

The Office action asserts that the specification fails to provide an adequate written description of determining gesture information associated with a state of mind of the user based on received audio-visual information associated with the user, as recited in claims 1, 10 and 15. More particularly, the Office action asserts that “only in the broadest sense” does the specification describe that “audio-visual information may be used, but fails to provide any details, specifics as to how to achieve the claimed function.” See Office action of November 14, 2005 at page 3. Applicant respectfully disagrees.

The claims recite determining gesture information based on received audio-visual input associated with a user. Determining gesture information based on received audio-visual input

associated with a user is described in the specification. See specification page 13, line 18 to page 14, line 19 (describing the various audio-visual information that may be received and used to determine a gesture, and thus an emotional state, of a remote participant). Notably, the Office action specifically states that the “specification... only in the broadest sense states that audio-visual information may be used.” See Office action of November 14, 2005 at page 3. Limiting the recognition that claims 1, 10, 15 and 16 are supported by the specification to only “the broadest sense” does not support the argument of the Office action that the claims do not satisfy the written description requirement. Furthermore, as noted above, the claimed subject matter can be supported by express, implicit, or inherent disclosure. See MPEP 2163. Here, the claimed subject matter is clearly supported by express disclosure in the specification.

Furthermore, none of claims 1, 10, 15 or 16 recite a method, or a system having means, for “how to interpret the audio-visual information to become gestures.” However, the Office action asserts that the specification fails to describe “how to interpret the audio-visual information to become gestures,” which is not a claimed feature. See Office action of November 14, 2005 at page 3. Notably, the Office action does not assert that determining gesture information based on received audio-visual input associated with a user, which is recited in claims 1, 10, 15 and 16, is not supported in the specification, and specifically states that the “specification... only in the broadest sense states that audio-visual information may be used.” As noted above, “an applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention.” See MPEP 2163(I) (citing Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997)) (emphasis added). Here, the specification clearly describes the claimed invention “with all of its limitations.”

Accordingly, Applicant submits that the subject matter in claims 1, 10, 15 and 16 complies with the written description requirement. Therefore, Applicant requests withdrawal of the rejection of claims 1, 10, 15 and 16.

Claims 6-9, 11-12, 17 and 21

The Office action asserts that “the specification fails to disclose a single embodiment which includes both a device for a user to input gesture information and to determine gesture based on audio-visual information as is claimed.” See Office action of November 14, 2005 at page 3. Applicant respectfully disagrees.

“It is now well accepted that a satisfactory description may be in the claims or any other portion of the originally filed specification.” MPEP 2163 (emphasis added) (citing *In re Koller*, 613 F.2d 819, 204 USPQ 702 (CCPA 1980) (original claims constitute their own description)). Each of claims 6-9, 11 and 17 are original to the application and thus constitute their own description to satisfy the written description requirement. Furthermore, the portion of claim 12 that has been amended (e.g., amending “software algorithm” to “software analysis process”) is not related to the concept of “a single embodiment which includes both a device for a user to input gesture information and to determine gesture,” as described in the Office action. See Office action of November 14, 2005 at page 3. Thus, original claim 12 also satisfies the written description requirement for this element of the present claim 12. Additionally, claim 21, although newly added, is supported by at least original claim 7 because original claim 7 describes the gesture determination information in the same way as it is described in claim 21 (e.g., “the gesture information includes selectable emotional states and the movement of the tele-embodiment unit is pre-programmed to correspond to a selected emotional state,” as recited in claims 7 and 21).

Furthermore, “a single embodiment which includes both a device for a user to input gesture information and to determine gesture based on audio-visual information” is explicitly supported in the specification. The specification describes that a “local unit... may essentially include, or have access to, its own tele-embodiment unit, having all of the various features and advantages of the tele-embodiment unit.” See specification at page 12, lines 13-22. The specification further describes that the local unit “includes a gesture control device... for determining a gesture of a remote participant,” see specification at page 12, lines 9-12, and the tele-embodiment unit “reflects and demonstrates a gesture of the remote participant,” see specification at page 9, lines 10-14. Thus, the specification clearly describes “a single

embodiment which includes both a device for a user to input gesture information and to determine gesture based on audio-visual information.”

Accordingly, Applicant submits that the subject matter in claims 6-9, 11-12, 17 and 21 complies with the written description requirement. Therefore, Applicant requests withdrawal of the rejection of claims 6-9, 11-12, 17 and 21.


### Conclusion

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Pursuant to 37 CFR §1.136, Applicant hereby petitions that the period for response to the action dated November 14, 2005, be extended for one month to and including March 14, 2006. The fees in the amount of \$120 for the one month extension of time is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to Deposit Account No. 06 1050.

Respectfully submitted,

Date: February 15, 2006

  
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